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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/658,514
Filing Date: September 09, 2003
Appellant(s): FRANK ET AL.

Frankie W. Wong
Reg. No. 61,832
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/16/09 appealing from the Office action mailed 5/11/09.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2002/0165990	Singhal
2001/0024434	Ayyagari
2003/0142651	Matta

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7,9-16,18-25,27-34,36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari et al. (US 2001/0024434), herein referred to as Ayyagari, and further in view of Singhal et al. (US 2002/0165990), herein referred to as Singhal.

As per claims 1,10,19,28, Ayyagari discloses a method for providing network management in a hybrid wired/wireless local area network, the method comprising:

receiving at a network device, from one or both of a first access point and/or a first switch, a first messaging protocol message containing quality of service (QoS) information (see paragraph 48, *showing how a router i.e. network device, receives QoS request from access pointer [200]*);

responsive to said first messaging protocol message, determining at least a minimum QoS level for operation of one or more of said first switch, said first access point, a second access point, and /or a second switch (see paragraph 50, *showing how the network device i.e. router, determines if there are sufficient resources to honor the requested quality of service i.e. minimum QoS level, by using the assistance of a resource database*); and

distributing by said network device, QoS information corresponding to said determined at least a minimum QoS level to one or more of said first switch, said first access point, said second access point and/or said second switch, using a second messaging protocol message (see paragraphs 59 and 60, *showing how QoS is distributed by said network device by passing along information i.e. second messaging protocol, whether the QoS request has been denied or by sending an acknowledgement message back to the starting node; and since the router is along the path of nodes it is implied that the router is at least part of the distributing of the QoS information).*

Although the system disclosed by Ayyagari shows substantial features of the claimed invention (discussed above), it fails to disclose that the second messaging protocol is different from the first messaging protocol.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Ayyagari, as evidenced by Singhal.

The system of Ayyagari shows in Fig. 2 that an access point [200] is connected to a router [235] to provide a wireless first message protocol and wired second message protocol. In an analogous art, Singhal discloses a network device that has both a wireless interface and a wired interface to enable short range wireless access points to participate within a coordinated networked environment (see Fig. 2 and Abstract). Singhal further discloses the need to have wireless and wired capability in an access point that can enforce quality of service metrics (see paragraph 6).

Given the teaching of Singhal, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Ayyagari by employing a network device that can provide a first messaging protocol and a second messaging protocol where the first wireless messaging protocol is different than the wired second messaging protocol, such as disclosed by Singhal, in order to communicate quality of service information to wireless network and wired networks from a single device.

In considering the second messaging protocol being different than the first messaging protocol, the router and access point disclosed in Ayyagari would be a single device with both wireless access point and wired router capabilities. Since the device of Singhal is able to communicate using both messaging protocols, one of ordinary skill in the art would have found it obvious for the network device to send/receive QoS messages from a wireless or wired node. Therefore, if a wireless message was being sent from a wireless node to the network device, and the network device passes messages to a wired node, the second messaging protocol would be different than the first.

As per claims 2,11,20,29, Ayyagari further discloses providing access to at least one of a plurality of access devices based on said distributed QoS information (see paragraphs 59-60, *describing denying the request if there are not enough resources to support the QoS request or allowing access if there are sufficient resources*).

As per claims 3,12,21,30, Ayyagari further discloses queuing traffic associated with at least one of said plurality of access devices to maintain said determined at least a minimum QoS level (see paragraph 56).

As per claims 4,13,22,31, Ayyagari further discloses prioritizing said traffic associated with at least one of said plurality of access devices to maintain said determined at least a minimum QoS level (see paragraph 54).

As per claims 5,14,23,32, Ayyagari further discloses scheduling access by at least one of said plurality of access devices to at least one of said first and second access points (see paragraph 31, *showing a scheduling of higher priority packets before lower priority packets*).

As per claims 6,15,24,33, Ayyagari further discloses distributing said QoS information to at least a portion of the hybrid wired/wireless local area network (see paragraph 48).

As per claims 7,16,25,34, Ayyagari further discloses allocating bandwidth to maintain said at least a minimum QoS level (see paragraphs 17-18).

As per claims 9,18,27,36, Ayyagari further discloses that each of said first and second messaging protocol messages comprises at least one message selected from the group consisting of an access point status message, access point configuration message, a switch status message, a switch configuration message, a client status message and a device discovery message (see paragraph 59, *showing the access point status message of implied by informing previous nodes all the way up to the starting node of QoS request status and since starting node can be laptop see paragraph 48, it is implied that the access point will be one of the nodes to give a status message*).

Claims 8,17,26,35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari-Singhal as applied to claims 1,10,19,28 above, and further in view of Matta et al. (US 2003/0142651), herein referred to as Matta.

Although the system disclosed by Ayyagari-Singhal shows substantial features of the claimed invention (discussed above), it fails to disclose balancing a load on one or both of said first switch, said first access point, said second access point and/or said second switch to maintain said at least a minimum QoS level.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Ayyagari-Singhal, as evidenced by Matta.

In an analogous art, Matta discloses estimating QoS for making a handoff trigger decision for a remote terminal in a wireless IP network (see Abstract). Matta further discloses balancing load among a plurality of access points based on QoS that the access points can provide (see paragraph 106).

Given the teaching of Matta, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Ayyagari-Singhal by employing load balancing, such as disclosed by Matta, in order to avoid an unusually higher performance base station to be overwhelmed by handoffs, especially under the case of several remote terminals.

(10) Response to Argument

A) Appellant contends that Ayyagari does not disclose receiving at a network device, from one or both of a first access point and/or a first switch, a first messaging protocol message containing quality of service (QoS) information.

A) In considering A), the Examiner respectfully disagrees. Examiner has distinctly pointed out that the network device is considered the router [235] and the access point is the access point [200]. The QoS message is considered a message requesting QoS. Since it's being sent from the access point to the router, it is the network device (router) that is receiving the request of QoS (see paragraph 48). The request of QoS is considered a message containing QoS information because the request contains QoS information so that the network can determine if it can support the requested QoS information. The specification does not provide any specific definition as to what the QoS information should contain and the claim is not specific as to what the QoS message should contain, so the Examiner interprets the request for QoS information as a message containing QoS information. Examiner concedes that the SBM can be a function of the access point. However, the Examiner believes the router, is a separate device from the access point. Fig. 2 shows the Access point [200], in communication with the router [235] as two separate devices. The access point sends a message requesting QoS to a router 235. Router 235 is not equivalent to SBM 240. Therefore, the rejection stands with the router considered as the network device, receiving a protocol message from an access point. The

Appellant has not provided any evidence that the access point [200], SBM [240], and router [235] are the same device. Even if they were the same device, an internal message sent from the access point to the router would still meet the limitation of the claims since it is not claimed that the receiving network device is separate from the first access point and/or switch.

B) Appellant contends that Singhal does not disclose that the second messaging protocol is different from the first messaging protocol.

In considering B), the Examiner respectfully disagrees. Singhal discloses the need to have wireless and wired capability in a routing device that can enforce quality of service metrics. Wired and wireless protocols use different messaging protocols, hence the need for a routing device that can support both. It would be obvious to one of ordinary skill in the art that if a router could support both wired and wireless protocols the router would distribute to wired devices using the wired messaging protocol and the wireless devices using the wireless messaging protocol.

C) Appellant contends that Ayyagari fails to disclose scheduling access by at least one of said plurality of access devices to one or both of said first and/or said second access points.

In considering C), the Examiner respectfully disagrees. Ayyagari discloses scheduling transmission of higher priority packets than packets having lower priority (see paragraph 31). That is access by nodes of higher priority will be scheduled before nodes of lower priority.

D) Appellant contends that Ayyagari fails to disclose distributing said QoS information to at least a portion of the hybrid wired/wireless local area network.

In considering D), the Examiner respectfully disagrees. QoS information is distributed to a least a portion of the network because it is a QoS request. The request is either approved or denied by the network depending on whether the QoS can be supported. Therefore, QoS information is distributed to at least a portion of the hybrid wired/wireless local area network.

E) Appellant contends that Ayyagari does not disclose allocating bandwidth to maintain said at least a minimum QoS level.

In considering E), the Examiner respectfully disagrees. Allocating time intervals means allocating time that bandwidth is used by a certain device.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Philip J Chea/

Examiner, Art Unit 2453

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